

Amendments to the Claims:

Please amend claims 1, 9 and 17 as shown in the following listing of claims. This listing of claims will replace all prior versions, and listings, of claims in the application.

- 1 1. (currently amended) A method of correcting erroneous image signals
2 comprising:
3 providing a high signal and a low signal based on an image signal of a
4 previously processed pixel, said image signal of said previously processed pixel being
5 an image signal of a captured image, said high signal and said low signal defining a
6 signal range about said image signal of said previously processed pixel; and
7 digitizing an analog signal of a current pixel using said high and low
8 signals as references to derive a digitized signal of said current pixel within said
9 signal range, including limiting said analog signal of said current pixel by said high
10 and low signals, said analog signal of said current pixel being another image signal of
11 said captured image.
- 1 2. (original) The method of claim 1 further comprising a step of converting said
2 image signal of said previously processed pixel to said high signal and said low
3 signal.
- 1 3. (original) The method of claim 2 wherein said step of converting said image
2 signal of said previously processed pixel includes digital-to-analog converting said
3 image signal of said previously processed pixel to said high signal and said low
4 signal, wherein said high and low signals are voltages.
- 1 4. (original) The method of claim 1 further comprising a step of comparing said
2 analog signal of said current pixel with an analog signal of a previously processed
3 pixel.

1 5. (original) The method of claim 4 further comprising a step of converting said
2 image signal of said previously processed pixel to said high signal and said low
3 signal, wherein said high and low signals are dependent on said comparing of said
4 analog signal of said current pixel with said analog signal of said previously
5 processed pixel.

1 6. (original) The method of claim 1 wherein said step of digitizing said analog
2 signal of said current pixel includes utilizing a flash analog-to-digital converter for
3 said digitizing.

1 7. (previously presented) The method of claim 1 further comprising a step of
2 adding a conversion signal to said digitized signal of said current pixel, said
3 conversion signal being a digitized image signal of said previously processed pixel.

1 8. (original) The method of claim 1 wherein said image signal of said previously
2 processed pixel is a digital signal, and wherein said image signal has more bits than
3 said digitized signal of said current pixel.

1 9. (currently amended) A system for correcting erroneous image signals
2 comprising:
3 means for outputting a high signal and a low signal based on a an
4 image signal of a previously processed pixel, said image signal of said previously
5 processed pixel being an image signal of a captured image, said high signal and said
6 low signal defining a signal range about said image signal of said previously
7 processed pixel; and
8 an analog-to-digital converter having a high reference input and a low
9 reference input to receive said high signal and said low signal, said analog-to-digital
10 converter being configured to digitize an analog signal of a current pixel using said
11 high and low signals as references to derive a digitized signal of said current pixel
12 within said signal range such that said analog signal of said current pixel is limited,
13 said analog signal of said current pixel being another image signal of said captured
14 image.

1 10. (original) The system of claim 9 wherein said outputting means includes a
2 digital-to-analog converter to generate said high and low signals from said image
3 signal of said previously processed pixel.

1 11. (original) The system of claim 10 wherein said digital-to-analog converter is
2 configured to convert an input digital signal having more bits than said digitized
3 signal of said current pixel.

1 12. (previously presented) The system of claim 11 wherein said digital-to-analog
2 converter is a ten bit digital-to-analog converter, and wherein said an analog-to-digital
3 converter is a seven bit analog-to-digital converter.

1 13. (original) The system of claim 10 wherein said outputting means includes a
2 comparator that outputs a comparison signal to said digital-to-analog converter, said
3 comparison signal being based on a comparison of said analog signal of said current
4 pixel with an analog signal of a previously processed pixel, said high and low signals
5 generated by said digital-to-analog converter being dependent on said comparison.

1 14. (previously presented) The system of claim 13 wherein said digital-to-analog
2 converter is a ten bit digital-to-analog converter, and wherein said an analog-to-digital
3 converter is a six bit analog-to-digital converter.

1 15. (previously presented) The system of claim 9 further comprising a means for
2 adding a conversion signal to said digitized signal, said conversion signal being a
3 digitized image signal of said previously processed pixel.

1 16. (original) The system of claim 9 wherein said analog-to-digital converter is a
2 flash analog-to-digital converter.

1 17. (currently amended) A system for correcting erroneous image signals during
2 analog-to-digital conversion comprising:

3 a sensor array of photosensitive pixels, each of said photosensitive
4 pixels being configured to accumulate an analog image signal when exposed to light
5 to produce analog image signals of a captured image; and

6 an analog-to-digital converter unit operatively coupled to said sensor
7 array to receive said analog image signals of said captured scene from said
8 photosensitive pixels, said analog-to-digital converter unit comprising:

9 a digital-to-analog converter that outputs a high signal and a low signal
10 based on a digital image signal of a previously processed photosensitive pixel, said
11 digital image signal of said previously processed pixel being an image signal of said
12 captured image, said high signal and said low signal defining a signal range about said
13 digital image signal of said previously processed pixel; and

14 an analog-to-digital converter having a high reference input and a low
15 reference input to receive said high signal and said low signal, said analog-to-digital
16 converter being configured to digitize an analog signal of a current photosensitive
17 pixel using said high and low signals as references to derive a digitized signal of said
18 current pixel within said signal range such that said analog signal of said current pixel
19 is limited, said analog signal of said current pixel being another image signal of said
20 captured image.

1 18. (original) The system of claim 17 wherein said digital-to-analog converter is
2 configured to convert an input digital signal having more bits than said digitized
3 signal of said current pixel.

1 19. (original) The system of claim 17 wherein an analog-to-digital converter unit
2 includes a comparator that outputs a comparison signal to said digital-to-analog
3 converter, said comparison signal being based on a comparison of said analog signal
4 of said current pixel with an analog signal of a previously processed pixel, said high
5 and low signals being dependent on said comparison.

1 20. (original) The system of claim 17 further comprising a means for adding a
2 conversion signal to said digitized signal, said conversion signal being based on said
3 low signal.

- 1 21. (original) The system of claim 17 wherein said analog-to-digital converter is a
2 flash analog-to-digital converter.